

THE

MEDICAL AND SURGICAL REPORTER.

Whole Series, }
No. 282.

PHILADELPHIA, MARCH 15, 1862.

New Series,
Vol. VII. No. 24.

ORIGINAL DEPARTMENT.

COMMUNICATIONS.

Aphthous Cachexia.

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This is a disease that affects assimilation, and is accompanied with functional derangements and changes of structure of the mucous membranes lining the whole track of the *prima viae*. I do not know that writers apply the term *cachexia* to this disease, but when it is considered how common it is, and how often it prevails in certain localities, and that, too, without changing its character by any other than functional derangements in distant organs, and its effects upon general nutrition, we cannot fail to recognize in it all the elements of an idiopathic disease. That it is a *cachexia* in the strictest sense of the word, I think no one will deny; that it is not tuberculous *cachexia*, is evident from the fact that it may last for years in a marked degree, without resulting in tuberculosis, or any other scrofulous affection. It is true that *phthisis pulmonalis* is very often the sequela, but it is where the strumous diathesis was an original vice, existing long before this disease showed itself; neither can it be pretended that it is in any way allied to syphilitic or cancerous *cachexia*; hence the propriety of the term *aphthous cachexia*.

It may exist as an idiopathic or symptomatic disease. It has a tendency to prevail in certain localities, and to affect persons of peculiar constitutions.

Its cause, whether external or internal, whether depending on imperfection of organism, or acquired by surrounding influences, must act by lessening vital force, and especially the functions of the nerves of organic life.

The influence must be persistent, acting with sufficient moderation, and enduring for a length of time necessary to produce its morbid impression; the tendency of which is to extend and diffuse itself over the whole mucous structures, irritating the mouths of the ducts of secreting organs, entering these ducts, and in the end operating by sympathy, or in a direct manner upon the intimate structure of the organs themselves.

When a certain amount of impression has been produced by the morbid agent, the organ most liable to become diseased in a given case begins to show evidence of its presence, and from it as a focal point it travels by continuity of structure, and by exciting distant sympathetic action, changing secretions, which irritate, and even seem to corrode the surfaces over which they pass; affecting, by reflected irritation, the spinal nerves and brain, as well as the system of organic nerves.

At the same time, while it influences the whole nervous system by direct and reflex action, it works changes of structure in the *hollow viscera*, deeper than the mucous surfaces, including the *cesophagus*, *stomach*, *bowels*, *ducts of the secreting organs*, and, in fine, the intimate structure of the organs themselves. In strumous constitutions, let the disease commence where it will, the lungs oftenest "fall" into fatal disease when the powers of the system are kept depressed for a sufficient length of time. The early symptoms of this disease are modified by age, sex, and condition of person so attacked; they may be divided into four classes, namely, children, adult males, females *neither* *enceinte* nor *nursing*, females *enceinte* or *nursing*. When the nursing child is attacked, the first symptoms are restlessness, a disposition to *dreol*, as in teething, is more inclined to vomit than usual, nurses voraciously at times, and in turn entirely refuses the

breast; the bowels are irregular, being sometimes costive, and at other times relaxed; the substances ejected by vomiting, and that passed at stool are variable in appearance, as well as in their reactions, being sometimes alkaline, and again acid, as the disease affects most severely the salivary glands, liver, and pancreas, or the lining membrane of the stomach, or the glands in the region of the cæcum. While these general symptoms are in progress, and very soon after their commencement, on inspection of the inside of the cheeks and the surface of the tongue, aphthous sores or patches will be found of greater or less extent, according to the severity of the cause or the predisposition of the patient.

Through the agency of the constitutional disturbance, and the local eruption, the patient loses flesh and healthy color, and, unless relieved, the mesenteric glands become diseased, or the mucous membrane of the bronchia are attacked by aphthous inflammation, and very soon after the commencement of the irritation of the ducts in the one case, or the aphthous condition of the mucous membrane in the other, tubercular matter is deposited in these organs, and tabes mesenterica or phthisis pulmonalis carries off the patient; again, the force of the disease is spent upon the mucous surfaces of the alimentary canal, and the secreting organs emptying into it, producing chronic vomiting, obstinate diarrhoea or dysentery, and in the end both functional and *structural* disease of the secreting organs and surfaces, increasing secretion, and modifying its properties—in some diminishing, and in others annihilating it. Again, the anaemic condition that is induced by impaired digestion and diminished lacteal absorption affects the cartilages and bones, laying the foundation for an endless variety of distortions of the spine, and disease of the large joints, as well as a great variety of skin diseases, together with a diseased condition of the whole system of lymphatic vessels and their associated glands.

In the male adult the symptoms and course of the disease are somewhat different, though the difference depends more upon the difference in the causes than is found to exist in the disease—the same state of nervous depression exists in each case, and the disease is of the same tardy, universal, and insidious nature. In this class of cases we have the patient's description of his feelings, which better define the incipient stage, as well as his appearance to guide us. His first complaint is of general ill health, a saltish or

peppery taste in the mouth, and a burning sensation in the stomach; food and drink lose their accustomed taste; the appetite becomes capricious; more or less thirst is complained of; the skin is dry and sallow, having a peculiar dead and doughy appearance, and has the soft feel of oiled silk, but more dry than in health; the adipose tissues become absorbed; the skin sinks into the interstices between the muscles, seeming to adhere to them. While the external appearances are in progress, the mouth, tongue, and throat exhibit aphthous spots, differing from the preceding case in having portions well defined, where the membrane looks to be entirely taken away by absorption, (as if cut out with a "punch,") or eaten out by some corrosive substance, leaving the margins of the remaining membrane that surrounds these patches as perfect and smooth as in health; there is no effusion of lymph upon their surfaces, nor any incrustation as in the former variety.

From the sensation of heat in the stomach and pepperish taste in the mouth and oesophagus, that precede the other symptoms, we are led to infer that the same aphthous condition of the mucous membrane of the stomach existed before it did in the mouth. The condition of the bowels differs somewhat from the former variety; there is more persistent costiveness in the early stage, and more uncontrollable diarrhoea in the later; indeed, there is reason to believe that many of the cases of chronic dysentery, in which there is ulcerative disorganization that resists all treatment, are due to this cause. Again, the glandular disturbances are more obstinate than in the infant. If the liver is torpid, or its secretions vitiated and excessive, it is much more difficult to remedy, and the changes that are wrought in the alimentary canal are more marked and more difficult to cure.

In the non-pregnant female not nursing, the symptoms are nearly allied to those in the adult male, except that they seem to be largely influenced by the menstrual function. In many cases the mouth only becomes sore at the monthly periods, the disease disappearing as soon as the menses subside. The aphthous condition that affects the adult male in the *prima vice* only as the original disease, in the female attacks the organs of generation as well as the *prima vice*; and by the close sympathy that exists between these organs and the rest of the system it works out lasting and serious trouble, that tells fearfully upon the general health, which was already im-

paired by the existence of the disease in the stomach and bowels previous to its locating in those organs.

In estimating the effects of the disease upon the two sexes, we should take into consideration the fact that the nervous system of the female is much more sensitive to morbid impressions, and that while the nerves of organic life seem to be more deeply implicated in the early stage of this disease, its continuance for any great length of time cannot fail to affect, through their different twigs, the spinal column and brain, through which a series of reflex nervous symptoms are set in motion that obscure by their intensity all other considerations in the case.

In the *enceinte* or lately delivered and nursing female, the symptoms are variable—from a mild and completely controllable salivation to the most helpless state of *anæmia*. It generally commences like the other forms already enumerated, either a few days before confinement or very soon afterward, and, like them, is preceded by a burning sensation in the stomach; more or less *ptyalism*; *aphthous patches* in the mouth and throat, though much more painful and acutely inflamed than in either of the former varieties; the bowels become diseased much earlier; the circulation becomes rapid; the secretion of milk is arrested; the *lochia* discharge ceases; there is profuse perspiration over the whole surface; respiration becomes embarrassed; the patient complains of great thirst and a feeling of heat and suffocation; there is loss of appetite; vomiting and diarrhoea soon follow; and very soon, if not relieved, she passes into a condition resembling the stage of collapse in *cholera*, and death closes the scene. This is a short picture of the more rapid form of the disease—the milder ones occurring from the simplest form referred to, up to the more grave just described; and the symptoms vary according to the severity of the attack.

The pathology of this disease is to be studied mostly by its effects upon the *glands* that empty their secretions into the *prima vœ*; the *circulation* by which they are nourished and from which they secrete, and the *muscular* as well as the *mucous coat* of the alimentary canal.

In treating of the symptoms as they occur in the infant, enough has been said to give an idea of its pathology. In the adult male the condition of the mouth and fauces have been already alluded to, and need no further notice here. The changes that are produced in the *œsophagus* and

other portions of the alimentary canal are often of more serious consequence. *Aphthous patches* occur as in the mouth, and, continuing for a length of time, being necessarily irritated by the passage of aliment, etc., soon become more and more sensitive, the nervous irritation causing muscular contraction around the sensitive point. While there is relaxation above, the muscular fibers increase in size and number, become somewhat indurated, and the result is narrowing, if not entire closure of the canal, the ultimate results of which depend upon the location and extent of narrowing.

In the glandular system we sometimes find only slight functional derangement; again, the most destructive disorganization. The force of the disease seems to be spent more frequently and more markedly upon the liver than any other organ. The first change that is observed is inflammation and thickening of the duct leading to the gland, which, by sympathy first and then by continuity of structure in the mucous linings, travels into the intimate structures of the organ, increasing its secretion, on which account it is rendered very vitiated, and later, diminishing and annihilating it, causing functional changes which induce changes of structure as the disease proceeds; the minute terminations of the bile duct become obliterated, and the outlet of the bile being closed the thinner portions are absorbed and carried back into the circulation, while the *picromel* is left, giving to the liver a peculiar yellow appearance. Sometimes the organ is greatly hypertrophied and has much the appearance of malignant disease. Again, it is found atrophied. What is true of the liver, and the manner in which it becomes diseased, is also true of the *pancreas*. The spleen, too, is almost always found changed in color and size. The amount of change and the number of organs implicated is dependent on the length of time the disease has been in progress, as well as the predisposition, constitution, and mode of life of the patient. In the female non-pregnant nor nursing, in addition to the changes occurring in the male, we find the uterus and its annexæ more or less diseased both in function and structure; often there is nothing more than *aphthous patches* on the *cervix uteri*, which we find hypertrophied; again, we find the whole body of the uterus enlarged and the lining membrane studded with *aphthous sores* or uniformly inflamed; the inflammation, as in the ducts of the secreting organs, passing by continuity of

structure through the Fallopian tubes, reaches the ovaries and there produces a great variety of changes to which these organs are subject. In the pregnant or nursing female, the condition of the nervous system, of the uterus—indeed, the whole puerperal state, has a *character* that is imparted to all the changes that pre-existed in the system; this character I shall not attempt to define, but shall call it the puerperal state. The causes of this disease are usually of a kind that act slowly and silently, and its foundation is often laid before the patient recognizes the signals that nature hangs out to tell what is going on.

Whatever tends to impair the powers of the nervous system, or affect the organs through which it acts to produce the phenomena of organic life, tends to produce this disease—the use of water taken from a clay soil, tobacco, coffee, and malaria, are among such causes. In children the most frequent causes are teething, improper diet, poor ventilation, want of cleanliness, and the use of water spoken of above; while in the adult male, malaria, tobacco, bad diet, water from a clay soil, coffee, and hard labor, are the most common.

In many localities in the West and Southwest where there is much clay soil and the atmosphere is loaded with malaria, this disease is most prevalent; and when an individual's nervous system has become prostrated, spirits broken, his physical and mental energies so nearly extinct that he can scarcely be said to live, *he is said to be accimated.*

In the unimpregnated female the same causes obtain, and, in addition, the many uterine derangements to which she is liable—in many instances, if they do not precede the other causes—very soon after the accession of the disease they enter largely into the causes that tend to extend and perpetuate it. That such would be the case we might expect, when we regard the intimate sympathetic relation that exists between the uterus and stomach, and the effects produced through the stomach upon the other organs that are assisting in the assimilation of nutritious elements, as well as the uterine sympathy with the spinal column and brain.

In the pregnant female the abdominal viscera are more or less enfeebled, caused by the diversion of nerve power, which is "*called off*," by the new action going on in the uterus, to that organ. Thus we see in many females a pallid look and an enfeebled state of the whole system during the

period of gestation; and when that occurs in a constitution naturally feeble, or where there was some disease of the cervix uteri, but not sufficient to prevent pregnancy, it is then, when the foetus has become somewhat developed and the nervous energies begin to flag, that this cachexia is developed, through the stimulus, it may be, of some of the above-mentioned causes. *Here it is that the disease advances most fearfully.* Or if the system bears up through the period of gestation, *when it undergoes the shock of confinement, and then is taxed with the state of lactation*, particularly if any of the causes spoken of before are affecting our patient, especially the using of water from a clay soil, then it is that we get puerperal anaemia in its *highest perfection*.

In reference to water from a clay soil, spoken of so frequently, I would say that it contains properties which are so intimately in solution as not to be changed or precipitated by any degree of temperature—by being mixed in bread, or used in the preparation of tea and coffee; the system cannot appropriate it, therefore it becomes an irritant, which, when constantly applied to the mucous surfaces, cannot fail sooner or later to induce disease. Malaria, though operating in a different manner—for it poisons the system through the lungs and skin, by *depressing* the nervous energies, thus lowering vitality—in the end produces the same results.

In the diagnosis of this disease, the history of the case and the appearance of our patient will generally go far toward distinguishing it from an idiopathic-organic disease, either acute or chronic. In acute diseases of the stomach, bowels, liver, or any organ, the symptoms are more circumscribed, and the disease terminates sooner either in resolution or death.

This disease, if unchecked, goes on and on, gathering strength slowly but surely, widening the breach made in the healthy tissues, or entirely monopolizing the assimilative function; there is a peculiar color to the skin, particularly if the disease has made some progress, it is pale with a slightly *tawny* color—it feels smooth, soft, and dry. The prognosis is generally favorable, if the patient is situated so as to secure proper medical advice and treatment early, and is willing to submit to the necessary regimen.

The indications to be fulfilled in the treatment of this disease are, as in all others, first to remove the cause, then to assist nature in restoring a healthy equilibrium between the organs. In

the infant the health of the mother or nurse should claim our first attention, for if the child draw nourishment from an unhealthy system, or if such nourishment be deficient in any of its important elements, the child is sure to suffer. If the patient reside in a malarious district, the sooner a change is made for a healthy atmosphere the better. Both mother or nurse and child should use filtered, rain, or soft water for all purposes, both internal and external; the nourishment of mother or nurse should be particularly noticed, and exposure and fatigue guarded against. If the child be teething, attend to the state of its gums, and if necessary freely incise them—touch the aphthous sores in the mouth and throat with nitrate of silver, or use a lotion of chlorate of potash, ten grains to an ounce of water; apply it by means of a camel's-hair pencil morning and evening; if there is vomiting, and the ejections are exclusively acid, alkalies and absorbents should be freely given; if the fluids from the stomach be alkalescent, one of the mineral acids should be administered, either nitric or muriatic acid largely diluted; in either case mucilages may be administered with marked benefit; if the vomiting is excessive and the alvine dejection copious, clay colored, and having the smell of "rotten eggs," (sulphuretted hydrogen gas,) the skin dry and harsh, the tongue moist and covered with a white mucus, while by its cries and moans, its frequent change of position, drawing up of the knees, etc., indicative of severe pain, *showing a case of cholera infantum*, mercurials should be given, either in the form of calomel or mercury with chalk, until the stools are colored with bile; then follow with alkalies in order to neutralize any excess of acid that is almost always generated, the union of which with the bile causes green-colored stools, which irritate the mucous linings of the intestines over which they pass. The mercurial should be followed, as soon as it has produced a change of color in the stool, with some gentle purge, such as castor oil, rhubarb and soda, or magnesia, in order to carry off as soon as possible the acid and vitiated secretions, and to avoid the irritation to the bowels that would ensue if left to pass off unaided. An occasional warm bath, as well as hot fomentations to the bowels, are very grateful to the feelings of the patient and most truly beneficial; after this, small doses of Dover's powder, with tannin or kino, may be given to hold the bowels in check, and to relieve the

vomiting and quiet the irritability of the stomach and bowels. A quarter grain of calomel rubbed up with a little dry loaf sugar may be sprinkled upon the tongue; at the same time mucilages should be freely exhibited. Children of a serofulous habit, and inclined to marasmus, will be better treated by vegetable alteratives and iodine, followed by the bitter tonics and mineral acids, the exhibition of which should be varied from time to time according to circumstances in each individual case.

There are children who seem born with this cachexia, and which appear consequently of defective organization; any attempt to supply this deficiency by remedies will, as it always has, prove futile. For such sufferers a change of air, soft water, simple nutritious diet, with stimulants and tonics, as the patient can bear them, removing all unhealthy influences, and relieving temporary ills by appropriate treatment, will, in my opinion, give the patient the best and only chance to recover what nature has seemingly denied him.

In the adult male the disease has often progressed until many organs are implicated before a physician is consulted; indeed, it would seem as though several diseases were being developed at the same time, and which might be looked upon by a superficial observer as idiopathic diseases, affecting the several organs, but which, upon a more careful examination, may be traced to the diseased mucous membranes; the vitiated secretions from which continually aggravate the constitutional symptoms. The indications then to be met are, after removing as far as possible all causes that have aided in producing this diseased condition, to soothe mucous irritation, correct the morbid secretions, and thus send healthy impressions to the glandular system, both through sympathetic connections and their lining membranes. To accomplish this, mercury may be given, but it must be with great caution; its well-known effect is to increase and vitiate the secretions, and thus it may be readily understood that if improperly used it will do much harm. It should be given at considerable intervals, combined with some narcotic, and the products of its action should be neutralized and carried off as speedily as possible, as spoken of above. A pill composed of Mass. hydg. gr. iv; Ext. hyoscyami, gr. j; Pulv. ipecac. $\frac{1}{2}$ — $\frac{1}{2}$, will generally be well borne, once or twice a week, on going to bed. Tartarized antimony, in minute doses, so as to

operate silently and slowly, continued for a long time, always protecting the stomach and bowels by the use of mucilages, keeping the bowels regularly open with mild laxatives, and neutralizing any excess of acid or alkali that may be generated in the stomach or bowels, thus endeavoring, as far as possible, to establish that *harmony between the organs that exists in health*. While this internal treatment is in progress, counter-irritation should be made over the organ which seems to be the most in fault, and I think it will be found oftenest to be the liver; as soon as this is accomplished, nitro-muriatic acid, in small doses, largely diluted, and the alterative effect of an infusion of tar and blood-root will be found to benefit the patient much; the doses of the blood-root should not produce the least nausea, but as much should be taken as can be borne short of that effect; local applications of nitrate of silver, creasote, or some other astringent should be made to the aphthous sores in the mouth and throat. Chlorate of potash should be given in ten-grain doses, three times in the day; the patient should not be allowed fat meats, rich gravies, or any highly-seasoned article of food; the use of tea, coffee, and tobacco should be most particularly proscribed.

In the non-pregnant female, not nursing, the same general treatment is to be pursued as in the adult male; the condition of the female organs should be ascertained in reference to uterine or ovarian disease; if found diseased, whether the history of the case shows it to be primary or secondary, it should receive early attention, the treatment of which the limits of this article will not permit me to detail.

In the pregnant or nursing female, when the disease is aggravated, the patient anæmic, the alimentary canal throughout its whole extent appropriating scarcely any of the nutritious elements taken as food, but continually deriving from the blood those elements which should be retained to supply the waste of the tissues; while, if the patient has been nursing, the lacteal secretion is arrested, the secretion of the liver vitiated or wanting, the kidneys secreting badly, and nutrition at a stand still; in such a case, counter-irritation should be among the first means used, in order to hold in abeyance the internal irritation until other remedies may have time, either temporarily or permanently, to relieve the patient. This may be done by a seton charged with cantharides, or by any other means that is certain and

speedy. This done, the same course of treatment may be resorted to as in the other cases, using acids, or alkalies and absorbents, as the case may demand, with mucilages, astringents, and chlorate of potash, if necessary to restore to a healthy state the mouth and throat. Mercury should be prescribed only when *absolutely* demanded, at the same time sustaining the powers of the system by the most nutritious and simple diet, with tonics and stimulants as early as they will safely be borne. When the patient begins to improve—(now comes the “tug of war”)—care must be taken not to allow her to get up too soon, though she may be doing *extremely* well, having a good appetite with fair digestion; still it will be found she bears the least exercise very badly till health is fully established. The symptomatic form of this disease is seen in the last stages of tuberculosis, in far advanced cancerous affections and syphilitic disease, in low forms of protracted fevers, in dysentery and diarrhoea; the import of which is that the vital forces are in a state of great prostration, the secretions so vitiated as to be caustic, and the constitutional feebleness so great as to be unable to resist the effects of such morbid matters. In children it is often developed in diseases of the large joints and spine; and usually shows itself in the mucous membrane of the rectum, and about the verge of the anus; while in the adult it oftener attacks the air-passages. Its prognosis is generally unfavorable; the question, however, is wholly merged in the probable or improbable cure of the original disease, and the treatment should be palliative or radical according to these probabilities.

Palatine Defects and their Treatment.

BY JAMES E. GARRETTSON, M.D.,
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DISEASES OF THE MOUTH—Continued.

Still another modification of the obturator is that in which the piece is held to its place by a bulb or rim, which passes into the cavity of the break. This adapts the instrument to such cases as have neither teeth nor site for suction, where, for instance, disease has destroyed the whole of the hard palate, leaving alone, as boundaries of the cleft, the alveolar processes and soft palate. Such an obturator, together with the character of cleft for which it is adapted, is happily and truthfully exhibited in the accompanying drawings. Fig. 1 represents the mouth, Fig. 2 the obturator.

This case, together with others which represent modifications of the apparatus as the indications to be met are concerned, are from life, having occurred in the practice of prominent dentists of this city. The models, together with an accompanying history of the cases, were presented to the Pennsylvania Association of Dentists, at a meeting held by that society October 9th, 1860. For the use of the models I am indebted to the courtesy of my friend, Mr. S. S. White, publisher of the *Dental Cosmos*; for the history of the cases, to the reports published in that journal by the secretary of the society, George T. Barker, D.D.S. I am happy in having the opportunity to embody such a report in these papers—first, because of its practical character; and secondly, because it so well exhibits the range of such appliances.

"The first case, as seen in Fig. 1, from the practice of Dr. McGrath & Son, was that of a female

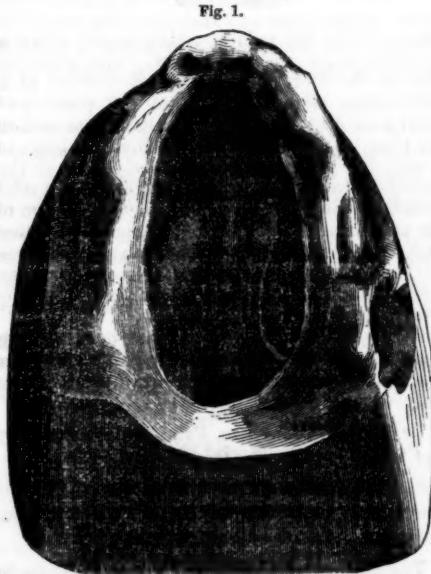
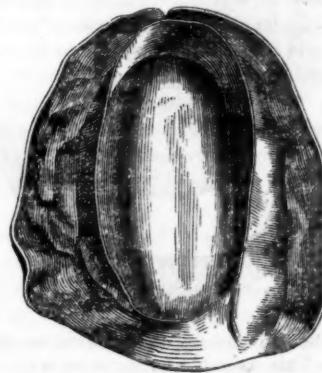


Fig. 1.

The parts which had been destroyed during the progress of the disease were the palate bones and the palatine processes of the superior maxillaries, (making an opening into the nose nearly two inches in length and one inch in breadth,) the turbinated bones (with the exception of the middle one on the left side, which is represented in the cut as projecting from the side of the cavity) and vomer, producing an enormously irregularly shaped cavity, extending as high up as the nasal bones, which latter, however, bore no traces of ever having been affected by the disease. The patient, in order to prevent the passage of the food into the cavity during mastication, had been in the habit of filling the opening with a fold of muslin, which answered to a certain extent for that purpose; the velum was entire; the patient had also lost all the teeth of the upper jaw.

"The kind of obturator employed in this case was simple and uncomplicated in its mechanism, Fig. 2. A plate was made to fit accurately to

Fig. 2.



the alveolar ridge, extending about the one-eighth of an inch beyond the posterior margin of the opening; also passing in to a distance of nearly an inch, and fitting as closely as possible to the anterior and lateral sides of the cavity. The object of this latter arrangement was to render the plate firm in its position. From the posterior margin of the opening, and extending forward about half the length of the alveolar ridge, was a fold of mucous membrane projecting inward and upward, over this fold; that portion of the plate which was opposite to it was bent. This, together with the suction obtained by the plate fitting closely to the alveolar ridge, enabled the wearer to keep it in its place. The opening was then covered, by soldering to this a second piece of plate, so fashioned as to represent as nearly as possible the form of the lost palate. The object in not extending the plate into the cavity on the posterior edge of the opening was to prevent a lodgment for the nasal secretions, which by their accumulation would prove offensive to the patient. The artificial teeth were then fastened in their proper position, and the apparatus was com-

over fifty years of age. In this instance the fissure was confined to the hard palate, and was undoubtedly the result of syphilis. Of the history of this case, all that could be obtained was such as was derived from answers to indirect questions which were put to her. They learned that the defect was the result of a disease which commenced as sore-throat, and continued its ravages for over three years before it was arrested; this, together with the appearance of the pharynx and uvula—they being covered with cicatrices, the result of old ulcers—left them without any doubt as to the true nature of the complaint.

plete. This obturator the patient has been wearing for about three months; it remains in place and fulfills the office of mastication as well as any ordinary suction plate in a mouth where no defect of the palate exists.

"The second case, Fig. 3, was also that of a

Fig. 3.



female, but the fissure was confined to the soft palate. This, as in the former case, was the result of syphilis. The fissure extended from the posterior opening of the nares through the velum to the palate bones, and was nearly an inch in breadth. The uvula was entirely gone, as well as the lateral half arches, and along with them the palato pharyngei and constrictors isthmi fauci muscles. In this case deglutition was impaired to a great extent; the food would pass into the nares, and the fluids would also pass into the nasal cavity and out through their anterior openings. The disease had not confined itself to the palate, but, extending to the nasal organs, had completely destroyed their internal structure, as well as a portion of the nasal bone, to such an extent as to materially change the external shape of that organ. The obturator, Fig. 4, constructed for this case, was of one piece, and made to cover the hard palate completely, extending from the central incisors to the posterior wall of the pharynx, and passing a short distance beyond the edges of the opening on each side. The plate was made to press firmly against that portion of the soft palate which remained, yet not so firm as to be the cause of irritation, the edges of the plate being slightly bent

downward for the same reason; the object being to prevent the possibility of the soft parts being

Fig. 4.



drawn above the palate, which would afford a communication with the nares. The posterior edge of the obturator was bent downward at a right angle with the body of the plate, and curved so as to form with the posterior wall of the pharynx an oval opening sufficiently large to permit the patient to breathe freely through the nostrils. In the act of deglutition, the muscles would contract and press against this portion of the plate, thereby cutting off the communication with the nares. To this plate was attached three artificial teeth—two lateral incisors and one molar—the whole being retained in position by means of clasps around the teeth.

"This obturator the patient has been wearing a little over two months, and, like the former one, has proved successful, deglutition being restored, and the speech considerably improved."

Dr. T. L. Buckingham, Professor of Chemistry and Metallurgy in the Dental College, a gentleman quite celebrated among his friends for his mechanical ingenuity, presented the following cases:—

The first case he said "he had anything to do with was that of a gentleman who had an opening through the hard palate, in the center of the arch, about as large as a ten-cent piece. This gentleman had worn an obturator with a sponge attached to it, made in the following manner: a plate was struck up to fit the roof of the mouth, and a piece of sponge was sewed upon the palatine surface to fill the opening, and to hold the plate in its place. Some of the objections to this obturator were, that the opening became enlarged from the absorption occasioned by the pressure of the sponge upon the sides of the cavity; it would also become very offensive, and require frequent removal. In this case a plate was

struck up to fit the mouth, and attached to the teeth by means of clasps. This simple appliance answered better than any other that had been made for him.

"Case 2 was a gentleman who had an opening into the left antrum, at the point where the second bicuspid and the first molar had been, but on the outer surface of the alveolar ridge, or rather where the ridge had been—for the alveolus was entirely absorbed opposite the opening, which was about half an inch in length by a quarter in width. The nasal bones were diseased, which caused an almost intolerable odor.

"He made, for this case, a small obturator to close the opening. This was left open at the top to allow him to place in it a small portion of chloride of lime. His intention was to correct, if possible, the offensive smell, but the patient did not live long enough to give it a fair trial; he remarked that while any of the chloride of lime remained in the obturator there was no unpleasant smell, but, unfortunately for the experiment, the gentleman had lost nearly all the sense of smell, and, therefore, could not tell when it had evaporated.

"He made for this case an upper set of teeth, to which the obturator was secured, it being held in position, to a great degree, by the plate and teeth.

"In the two preceding cases the voice was not altered when the appliances were in the mouth.

"Case 3 was a gentleman who, on a previous occasion, had a tumor removed which covered a portion of the posterior surface of the hard, and the anterior surface of the soft palate. The surgeon, on its removal, had divided the velum and uvula, so that the case resembled a congeni-

"Fig. 5 shows the appearance of the parts very clearly—the letters A and B showing the thickened muscles as they hung down on the sides of the pharynx.

"He made for this case an obturator, Fig. 6,

Fig. 6.



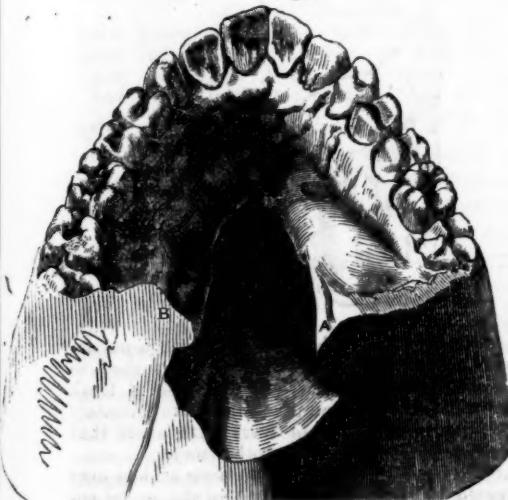
the plate of which covered the whole of the roof of the mouth, with a bulb attached, to extend up into the posterior nares and well back toward the antero-posterior walls of the pharynx, leaving but a small space between them. This obturator enabled the patient to eat and drink without annoyance; without it, food would pass into the nares and occasion much inconvenience. It also greatly assisted his voice, as many of his words could not be understood when it was not worn, but he could articulate them with great distinctness when it was in place; remarked that he had been more successful in restoring the voice in this case than in any other he had treated, and attributed it to the fact that this person, having once had his voice perfect, was always endeavoring to speak as he had formerly done, while in the congenital cases they did not try to overcome this difficulty.

"Case 4 was that of a lady who had an opening in the anterior part of the hard palate, a little larger than a ten-cent piece, and also a small one exposing the left antrum. All the teeth in the superior arch had been removed, and absorption of the alveolar process, opposite the smaller opening, had progressed to such an extent as to present at that point a deep depression; the remaining part of the alveolar ridge had not been absorbed more than is usual where the teeth have been lost.

"Fig. 7 shows the appearance of the different parts, C representing the smaller opening, and D the larger one; between these two points was the depression referred to.

"This lady had never worn any mechanical appliance, but had been in the habit of closing the larger opening with loose cotton or pieces of linen. Without having it filled, she could scarcely be understood when speaking. He made for this case, first, a plain plate to extend over both the openings, but not into them; upon this plate, at the point where the process had been absorbed, he arranged wax so as to restore the alveolar ridge to its natural fullness. By using the plate with the wax attached for a mould, he was able to obtain metallic dies. A second plate was then made to fit over that part of the first one which was covered by the wax;

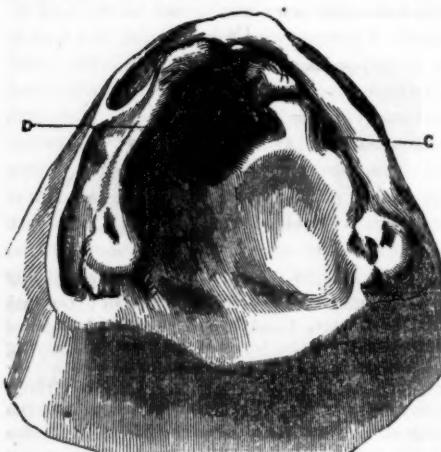
Fig. 5.



tal deformity. The attempt had been made twice to bring the soft parts together again by a surgical operation, which had failed.

these two plates were then soldered together. The object in forming a double plate was to fill up that part where absorption had taken place.

Fig. 7.



so that the plate when worn would resemble the roof of the mouth, and not be deeper on one side than on the other.

"This obturator was very successful, the voice was much improved, and she could eat and drink as well as persons ordinarily can who wear upper sets of teeth; and, what was more remarkable, she could wear it without springs or any assistance whatever to retain it in position.

"Case 5. — He stated that he hardly knew whether this case should come under discussion at the present time or not, as it could hardly be termed a palatine fissure, but, from its exceeding interest, he would now present it.

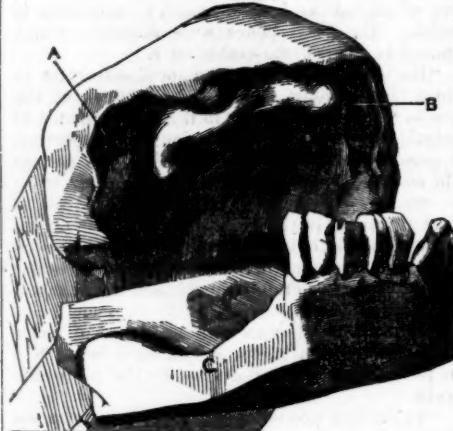
"A gentleman was handling a gun loaded with buck-shot, when it was discharged in his hands. The gun being pointed toward his head at the time, the load struck him at the angle made by the ramus and the body of the inferior maxillary on the right side, passing upward and outward on the opposite side of the face. It must have been a terrible wound, and should, from the representation given, have caused almost instant death. He, however, recovered after being confined to his bed for more than a year, and during that time he had to be fed with a spoon. The only way he could eat or drink was to lie on his back and let the food run down his throat, and it was a long time before he found he could swallow.

"The teeth in the upper jaw were all gone excepting the left second molar and wisdom tooth; both antrums were fully exposed, the remaining roof of the mouth being left almost flat. The lower jaw-bone was gone on the right side from the second bicuspid back, and also the condyloid process; but about three-quarters of an inch of the coronoid remained, which was drawn in so as

to partially cover the roof of the mouth. The molar teeth were lost on the left side, and also all on the right side from the symphysis. In taking hold of the lower jaw it could be moved either backward, forward, or laterally, to a considerable distance.

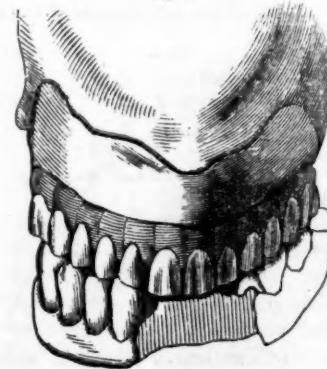
"Figs. 8 and 9 show this case—the letters A and B the openings into the antrum, and C the

Fig. 8.



end of the lower jaw-bone. The distance between the points A and C, when the mouth was closed, was just two inches.

Fig. 9.



"This gentleman had been wearing a partial set of upper teeth which had been attached to the molars, but the clasps of the artificial teeth had loosened them, and it was therefore necessary to replace this piece of work with a set that could be supported in some other way.

"This was the most difficult case he had ever treated. One of the greatest obstacles he encountered was the obtaining of a correct impression. To accomplish this, he first filled the antra with loose cotton to prevent the wax from pass-

ing into them; he then took as good a wax impression as he could of both the upper and lower jaws; from these he made impression cups to be used in taking the plaster impressions. There was very little difficulty in obtaining an impression of the upper jaw with plaster, (the antra being filled with cotton as before,) but it was far more difficult to take a good one of the lower jaw. The distance from the points of the teeth down to the point marked C, as shown in Fig. 8, was so great that when any material was pressed down to take the impression, it was almost impossible to remove it from the mouth without altering it so much as to render it of no value; after several trials he succeeded in getting a very good one with plaster. It had to be broken before its removal from the mouth, but by carefully putting the pieces together, a good plaster cast was obtained.

"He then made a plate to extend over the roof of the mouth and cover both of the cavities opening into the antra; on this plate he arranged wax, bringing it down as far as the alveolar ridge should have been; then made a metal cast and struck another plate to fit over the first, soldered them together, and placed upon these single gum teeth as he would have done had there been no more absorption than is usually found in upper cases.

"There was nothing peculiar in the formation of the lower case, except that the teeth had to be very long on the right side, (for this a block was made,) and the plate was not allowed to extend farther back than to the position once occupied by the second bicuspid tooth. The under teeth were put in more for the purpose of attaching springs for the support of the upper ones than for use.

"He could not say what success had attended this case, as the gentleman left the city immediately upon their insertion, and he had not seen him since that time."

Other cases of equal interest are found in the report, but as they are unaccompanied by models I omit them.

A material for obturators is fast winning its way to professional favor in the article known as Vulcanite. This is the base now so extensively used in the manufacture of sets of teeth. Its merits and demerits are widely discussed in all the dental publications of the day, and from these journals everything pertaining to it may be gleaned. The advantages claimed for it are: its cheapness, its lightness, its capability of being moulded into the most irregular positions, and its similation in color and feel to the natural parts. The objections are its liability to decompose and become offensive. The manipulation of the material is so easy that the surgeon attempting the manufacture from it of surgical appliances, would give himself a source of recreation

rather than work. To make an obturator from vulcanite you take an impression of the mouth in wax and make from it a plaster model precisely as before described. Prepared gutta-percha is now moulded over this model to the form required. Plaster is next run over this first model, the gutta-percha plate being between. The model and counter-model thus made are separated and the place of the original plate supplied with fresh vulcanite. The models are now put together and the vulcanite between subjected to pressure. The whole is then placed in an apparatus termed the vulcanizer, and this being filled with water the temperature is raised to some 325 degrees. When taken from the steam bath the plate is found to be as hard as bone. The last process consists in the polishing of the piece; this is a simple manipulation, and requires only one or two files, a burnisher, and some patience.

M. Desirabode, a French surgeon, proposes a palatine obturator for congenital fissure of the palate, (see Harris's Dictionary,) by which he thinks the sides of the alveolar border may be so approximated as to favor a union of the divided parts. It consists of a platina plate fitted to the vault of the palate and fastened to the teeth by means of three clasps soldered to each side, so as to cap the canine teeth, the bicuspid, and two of the molar teeth, bent upon the alveolar border in such a manner as to maintain the whole pressure. After the plate with these appendages has been well adapted, it is to be divided from before backward along the median line, and then a piece removed from either side so that the two edges may be separated about half an inch from each other. The two plates are now united by means of a thick and resisting band of caoutchouc, made fast by riveting. The plates thus united form a smaller obturator than the plate before it was divided, so that it can only be applied by putting the caoutchouc on the stretch, which is effected by means of two sticks so contrived as to force the two plates asunder. After the plate is properly adjusted these are removed, when, by the contraction of the caoutchouc, the sides of the alveolar borders are gradually approximated.

This contrivance of Desirabode looks very plausible, but, unfortunately, all experience is against its employment.

In the first place, to correct by pressure a fissure in the hard palate, implies the very earliest use of such force. A child is some five or six years old before its first dentition is properly

completed; and even at this period one would not dare to apply any such apparatus, because of the physiological process of absorption which has already commenced in certain of the teeth. Then if, on the contrary, he meant his instrument to apply to a more advanced period, he would have to wait until at least the sixteenth year, as before this age the fangs of the molars are not perfected. The bones by this time have, as a matter of course, become much less amenable to treatment. And, again, even besides this, as I know from practical teachings, his apparatus would in less than a week's time produce such periosteal trouble about the alveoli that no human being would or could bear the continuance of the pressure; or, even admitting there should be found a patient heroic enough to bear the treatment, the apparatus would have its usefulness destroyed in less than two weeks by the teeth to which it was attached coming away. In other words, the instrument is useless because the teeth, being the weaker and more yielding, would give way first.

In Liston and Mütter's Surgery is the engraving of an obturator made to supply the loss of both hard and soft palates. The contrivance, which is a simple plate such as I have described, is seen to extend from the teeth back to the fauces. Attached to the back portion of the plate representing the soft palate, is a metal pendulum working on a hinge—this pendulum is much better omitted, for while it cannot possibly answer any useful purpose it must certainly be much in the way. In making so extensive an obturator, it must not be forgotten that the part which represents the soft palate is to be given the double curve which is seen on looking into any healthy mouth. To get the impression for such an obturator we have only to employ a deeper impression cup.

To be continued.

New Treatment of Prolapsus Ani.—M. Foucher recommends the subcutaneous injection of strychnia in the treatment of the prolapsus ani of infants. Ten drops of a watery solution of strychnia (gr. iij to 3xj) are to be injected with Wood's syringe into the sphincter ani, and repeated after twenty-four hours. M. Foucher records the case of a girl, aged four years, in whom this treatment proved entirely successful. Great improvement followed the first injection. The quantity of strychnia injected on each occasion was about one-twentieth of a grain.—*Gaz. Méd. de Paris*, Feb. 9, 1861.

Medical Societies.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

Reported by William B. Atkinson, M.D., Recording Secretary.

November 13th, 1861.

VARIOLA, ITS MODIFICATIONS AND TREATMENT.

DR. BELL.—This subject was selected for me by the committee, to make some remarks on this evening. In restricting myself within these limits it will not be necessary for me to speak of the origin, symptoms in detail, and morbid anatomy of variola.

1. The most remarkable, the least to be anticipated, and the last observed modification is that produced by the passage of the variolous poison through the organism of the cow, and its resulting in true vaccination.—*Ceely, Bosquet, etc.*

2. The chief and most noteworthy modification of variola in the human subject, is that caused by the occurrence of previous vaccine disease, constituting varioloid.

There are two varieties of this varioloid modification—that produced in the natural way by exposure of the vaccinated person to the emanations from a variolous subject, and that caused by inoculation of a vaccinated person with variolous matter. The first variety is that of most ordinary occurrence.

The mitigation of variola by the inoculation of an unprotected subject with variolous matter hardly constitutes a modification. The eruption and fever are less in the inoculated than in the natural small-pox, but they are of the same character in both.

Epidemic and sporadic small-pox do not constitute modifications.

Akin to modifications are varieties. The two chief of these latter in small-pox are the *discrete* or *distinct*, and the *confluent*. To these are added the corymbose, the erysipelatous, the roseate, the tuberculated, and the petechial, as regards the cutaneous eruption.

Every variety is divisible into three stages, viz., incubation, maturation, and decline.

The two most noticeable varieties of variola, especially in reference to prognosis, are the *distinct* and the *confluent*. The first is usually quite manageable; the second, under any and every kind of treatment, is, in a large majority of cases, fatal. The liability to the one or the other of these varieties does not seem to depend on age, constitution, or previous habits.

There are modifications in the symptoms and in the intensity of the disease by the extent of the eruption in the posterior fauces and in the larynx and trachea down to the ramifications of the bronchia. In this highly morbid condition of the air-passages we meet with hoarseness, difficult breathing, cough, and sometimes asphyxia. To these are added tonsillitis and swelling of the soft palate, and consequent difficulty of swallow-

ing. Oedema of the glottis and larynx increases the complications at this time, and is, of itself, a cause of death. All these symptoms are most common in confluent small-pox.

As pustulation advances on to maturation, the fever is greatly moderated; but with beginning desiccation comes, often, secondary fever, during which the patient may sink beyond recovery. At this time, and even as convalescence approaches, patients are often tormented with phlegmonous, erysipelatous inflammation, abscesses, and imposthumes, and, sometimes, gangrenous destruction of parts of the skin. These incidents of small-pox are of much more frequent occurrence in males than in females, and, very generally, they are only seen in those who recover.

Cerebral and nervous symptoms marked by acute delirium, with great agitation, are seen both in variola and in varioloid, although they subside sooner in the latter than in the former. They are of bad augury in variola, and every now and then assume the features of *delirium tremens*, especially in those whose constitutions have suffered from previous excesses. Sometimes low delirium, with collapse of features, tremors, cold extremities, and *subsultus tendinum*, are the precursors of death.

The blood is supposed to be more particularly implicated in the petechial variety of variola. This is more common in males than in females. To it belongs the so-called black small-pox, (*variola nigra*,) the eruption in which is imperfect, and fails to reach complete maturation. Cases of this variety are of short duration, and almost invariably fatal.

Among the epiphomena of small-pox are pleurisy, pneumonia, and bronchitis, one or other of which is most apt to appear at the decline of the original disease.

Ophthalmia is described as a sequela of small-pox. I have seen little of it, either in the great epidemic of 1823-4, or in that of the last year.

Treatment.—Comparing my former with recent experience, I have little to add to inspire confidence in any therapeutical course or particular remedy. In mild cases, or those of the distinct variety, the cooling regimen—fresh air, cool and cold drinks, according to the taste or craving of the patient, will suffice; aided, sometimes, by a mild aperient. In the irritative or preliminary fever, the treatment will be the same as in that of other cases of fever. In hospital practice the physician seldom has an opportunity of seeing his patient until this stage—lasting from two to three days—has been gone through, and the eruptive one has commenced. The diagnosis once established, and it cannot be with any confidence until the eruption begins to rise into vesicles, the question comes up, Is abortion or jugulation of small-pox possible? Some have answered in the affirmative, but without adequate proof to sustain the assertion. Attempts for this end have been made by large blood-letting and purging, and by cauterizing the rising eruption, so as to prevent its reaching the stage of pustule.

Benefit has been claimed for these alleged preventive measures, viz., that, if they are not entitled to be thus called, they at least serve to mitigate the violence of the disease. There are, occasionally, patients of a full plethoric habit, and good constitution, who may be benefited by this antiphlogistic treatment; but, as a general thing, it is not called for. On the contrary, we may feel ourselves obliged, from the very onset, to administer stimulants to subjects of an anaemic nature, and whose system has been depressed by want and atmospheric exposures.

If the eruptive fever is high, we give saline purgatives or castor oil. This last is the article which will be found best adapted to the larger number of those laboring under variolous disease. In these cases I prefer spiritus mindereri, with the addition of sweet spirits of niter, and, sometimes, antimonial wine, sometimes ipecacuanha wine, as a febrifuge; allowing, at the same time, the patient the free use of a solution of cream of tartar sweetened, as a drink. Wakefulness and unrest are met by Dover's powder, in the ordinary ten-grain dose. Delirium will require its repetition at intervals, or a solution of acetate, or sulphate of morphia, in doses of one-eighth of a grain, repeated according to circumstances.

In confluent cases, early recourse will be had to a cordial and sustaining treatment, by the use of ale or porter, and of wine or brandy, in gruel, farina, etc., wine-whey, milk-punch, and nourishing broths. One or more of these, as may be selected, should be regularly given at the prescribed intervals, by night as well as by day. In variolous, as in other fevers, many a patient has sunk beyond recovery during the night, especially between midnight and morning, for want of the administration of diffusible and nutritive stimulants in alternation. Oil of turpentine, with camphor mixture, and some quinine, would seem to have been of service in the stage of secondary fever, with much prostration and delirium, simulating, in fact, typhoid fever. In such cases the tongue is dry, brown, and partially chapped; the throat greatly obstructed by thick, tenacious mucus, and the secretion from the variolous pustules lining it.

In laryngeal and bronchial complication, with febrile excitement, calomel and Dover's powder, in divided doses, a grain or half a grain of the former and three of the latter, combined with chalk, have sometimes been serviceable. For the most part, except occasionally, under particular circumstances, as an aperient, calomel is not called for in small-pox. In my first hospital practice, at the date previously noted, salivation was tried in a few cases, but with a very unsatisfactory result. More recently, chlorate of potash has been given, but, as far as I could see, without any benefit.

The local treatment will consist of substances used for gargles, and as caustics for the throat, and those applied to the skin. One of the symptoms aiding us to form a diagnosis, in small-pox, is sore throat, with painful and difficult deglutition.

In hospital practice it is desirable to get a gargle which is easily made, and can be freely used by the patient, in addition to its peculiar properties as a detergent and stimulating wash to the part. I have found nothing to meet these indications so well as a solution of common salt, one tablespoonful to half a pint of water, to which is to be added two tablespoonfuls of vinegar.

As relates to the external treatment, recourse has been had to baths of different temperatures, and vapor. Years ago I used cold affusion and sponging without success. The requisite means and nurses' help have been wanting to enable me to speak of the effects of warm and vapor baths. *A priori*, knowing how entirely, in many cases of confluent small-pox, the functions of the skin are obstructed, soothing, if not still more decidedly beneficial effects might be expected from this variety of bathing, by its opening some of the obstructed exhalants or secreting orifices of the skin.

Of the effects of silk masks, gold-leaf spread on the face, unguents simple and mercurial, and cauterization with nitrate of silver, I can say but little. In some cases the early and continued use of Lugol's compound solution of iodine, of the "stimulant" strength, has done some good in impeding the formation of pustules, and so far lessening subsequent pitting. If the results of these trials of various substances to the face to prevent pitting and scars were faithfully given we should have a singular diminution of the number of cases in which it is said to have been successful.

DR. COATES observed that the subject of vaccination had now been so much studied, that there had arisen a great tendency to unanimity about it in the medical world. He did not profess any particular advantage in the investigation. He has himself been led to incline very much to the idea that vaccination is not so exact a business as seems to have been for many years the general impression.

In the earlier debates on this subject, when cases of small-pox were reported as occurring after vaccination, it was contended by all that the operation had not been properly performed. For example, in the directions published by the British and Foreign Vaccine Institution, it was insisted upon as necessary, that the insertion be made with the lymph, and this taken on the seventh or eighth day. In the United States it has almost always, throughout the whole nation, been done with the scab. Thus, in many instances, seventeen or eighteen days had elapsed, yet we fail no more in preventing or modifying small-pox than occurs in England.

Vaccination varies much in individuals, and with different specimens of matter. Some have a small areola and scab, while others are much larger in every way. He did not believe the star-shaped form of areola was of as much importance as had been ascribed to it. He had re-vaccinated several cases on account of the areola being angular, but they did not take.

He had seen all the forms of the disease enumerated by the lecturer, except the corymbose, and supposed that this was of rare occurrence. But the extension of abstract medical science was a less urgent duty with the members of the society than the cure and prevention of disease. On this, the practical point, he would quote Stromeyer's recent publication. This eminent surgeon assumed a period in the hospital at Munich, embracing 10,000 cases, nearly all soldiers. Every Hanoverian soldier is vaccinated when he enters the army, and the operation is repeated upon him every five years. During the interval above described, the disease prevailed considerably in the City of Hanover; yet out of the 10,000, only four had anything at all resembling small-pox, and these were cases of the *windpocken* of Van Swietan—an eruption of a limited number of dry, horny, lenticular vesicles, accompanied with scarcely any indisposition. Of those revaccinated at this short interval, about thirty per cent. had more or less of the ordinary vaccine affection. From this important series of observations, Dr. Coates thought it might be fairly inferred that the periods of a whole lifetime, of seven years, of twelve years, etc., for which the protection afforded by vaccination was supposed to endure, were certainly not without numerous exceptions, and perhaps absolutely indefinite and uncertain. As vaccination is our *only* protection, he thought the Hanoverian treatment preferable to any one predicated upon supposed fixed periods, in which the benefit was believed to expire.

There seemed to him a very serious contradiction between the old alleged experience of so many years, ever since the time of Sydenham, that the cooling treatment was the most successful, and the recommendation to give warm punch, etc. He did not believe that success depended on extremes or on exclusives, but believed that the best results would be met with from moderation in the use of medical agents, and such a regimen as comported best with the comfort of the patient.

He had seen a case of a black man with confluent small-pox bled in the hospital; the oozing went on for twenty-four hours, and he died, though probably he did not lose more than an ounce and a half after the bleeding, which was to ten ounces.

He doubted saving any great number of lives by any treatment. He thought the muriate of ammonia valuable as a cooling remedy, and would put in a caveat to some, not to imagine it to resemble the acetate, which was in fact active as a stimulant. He was inclined to use veratrum viridi, but had never tried it in the disease.

The application of collodion, with the idea of preventing pitting, a practice evidently taken from the newspapers, had been obtruded on a patient of his by an interfering practitioner. The result was a bright erysipelas in each cheek, with great pain, and an increase of fever. This absurd application is a violent stimulant, and adheres with extreme rigidity, producing all the bad

effects of a forcible compression of an inflamed part.

It had occurred to him, as an objection to a small-pox hospital, that mild and bad cases should be placed together. A variety of chambers should be provided; bad cases should be isolated, and artificial ventilation used to prevent spreading.

He related an instance where the disease broke out in a boarding-school, and was confined by isolation, with entire success, though many persons were in the house.

To be continued.

EDITORIAL DEPARTMENT.

REVIEWS AND BOOK NOTICES.

A System of Surgery; Pathological, Diagnostic, Therapeutic and Operative. By SAMUEL D. GROSS, M.D., Professor of Surgery in the Jefferson Medical College of Philadelphia; Surgeon to the Philadelphia Hospital; Member of the Imperial Royal Medical Society of Vienna, etc. etc. Illustrated by Twelve Hundred and Twenty-seven Engravings. Second edition, much enlarged and carefully revised. In two volumes. Philadelphia: Blanchard & Lea, 1862. Price \$12.

The rapid sale and early exhaustion of a heavy edition of this great work on surgery, and the speedy appearance of an enlarged and improved second edition are causes for congratulation among all who feel a pride in the advancement of American medical literature. The work has been received throughout the land as the masterpiece of a leading surgeon, and as a crowning effort of one whose name has for a long time stood the most prominent in our surgical literature. The appreciation of the work abroad has been a universal commendation, and its translation into one European language has already advanced.

It is, beyond comparison, the most comprehensive work on surgery in any language, and as an exponent of the claims of American surgery, so much ignored in the foreign reprints, our national pride should interest us in its patronage.

The matter added to the new edition is an amount equivalent to some hundreds of pages, yet the bulk of the volumes is actually less than that of the first edition by one hundred and sixty-four pages. This reduction has been accomplished by condensation of language, and, most particularly, by a reduction of the size of the type used. Nearly three hundred illustrations have been added.

Among the most noticeable and important additions will be found those on the subject of gunshot wounds, a topic of great surgical interest at the present eventful period.

The complete manner in which the author has kept his book up with the current of improvements which have been developing in the short period elapsed since the first edition appeared, will be noticed by those who are familiar with journal literature.

The confident and positive manner in which the learned author gives the verdict of his own dictum to settle points about which surgeons throughout the world are cavilling, is a characteristic feature of the work. Thus, he firmly asserts the *unity* of chancrous virus, and as bluntly denies the communicability of secondary syphilis, while such opinions are in opposition to those of observers in this country and in Europe whose facilities for the practical study of syphilis are the greatest.

The great amount of valuable matter added in this edition evinces the erudition and industry of the author, and makes the work entitled to his claim of having embraced "the whole domain of surgery."

With our appreciation of the work as the greatest individual achievement with which American medical literature has yet been honored, and being aware how extensively it is known and valued, we have thought it unnecessary to do much more than announce the appearance of a second edition.

THE MEDICAL AND SURGICAL REPORTER.

PHILADELPHIA, SATURDAY, MARCH 15, 1862.

Correspondents and friends will please bear in mind the change in location of the office of the REPORTER.

HAVE WE TOO MANY DOCTORS?

Theologians are discussing the question whether "we have too many ministers?" Each participant in the discussion decides in the affirmative or negative as each looks at the matter from a different stand-point, and hence unanimity of opinion will not be likely to result. If the pecuniary interests of those who are in that sacred calling be the point from whence the observation is taken, there are too many; but if the spiritual wants of the world is the consideration, there are too few. So that the object seen, varies materially with the medium through which it is viewed, and with equally valid premises one may decide affirmatively and another negatively, and both, perhaps, be entirely correct.

Just so, in discussing the question whether we have too many doctors, we may answer it *yea* and *nay*, and make each affirmation or negation appear plausibly true.

Viewing the profession of medicine as a means by which a certain number of men are not only to gain a livelihood, but amass wealth and secure a competence for the "sere and yellow leaf" of age, doctors are too numerous; for not half of the whole aggregate number ever reach that happy goal of sensual ambition, a competence—not to say wealth. Now and then we find a physician who is reputed wealthy, who rides in his own carriage and wears his own livery; but they are,

"Like angels' visits,
Few and far between;"

and their rarity makes them the observed of all observers. And even here, if we trace the history of these exceptional cases, it may be their wealth is inherited, not earned, has descended to them as an heir-loom, and is not the product of their laborious painstaking. Still the mass of physicians are proverbially poor. The fruits of their toil are in the hands of the thousands over whom many wearisome hours have been spent in watching the struggle between life and death. The wealth to which they alone can lay claim is upon the debtor side of the ledger against those who are willing to owe, but never ready to pay. Viewed in this light, therefore, we have too many doctors. A lessening of the aggregate would increase the pecuniary compensation of the remainder. The larger the reduction, the brighter the prospects of those who should be left, not to say the better for humanity and the world.

But this is a merely mercenary view, and yet one which, no doubt, many take who enter upon the study of the healing art. Visions of gold, of opulence, allure and attract them, which, alas! are seldom realized.

Let us take our stand-point on a higher range. The profession of medicine is philanthropic, benevolent. It is the almoner of the public health; it is the guardian of life. It is the good Samaritan which binds up the wound, pouring in the oil of joy and consolation. Regardless of their own safety or weal, its votaries seek out the distressed and the downcast, soothe their pains and mitigate their woes. It is the healing art. Its studies, its investigations, its discussions all tend to one result—to promote the temporal well-being of all, to shield from the attacks of disease or to eradicate it from the system, to ward off the approach of death or despoil the monster of his prey.

Viewed in this light, the time will never come

when we shall have too many doctors; for till time shall be no more there will be woes to assuage, tears to wipe away, distresses to relieve, diseases to cure, aches and pains to ease, objects of pity to soothe, lives and health to be guarded and watched, and he who has a heart that throbs with sympathy for his fellow will always find objects enough on which to spend his utmost commiseration. And if the number of doctors were multiplied by thousands, each would find some kind word to utter or some pressing grief to pity.

Viewed, again, as a medium through which the goal of fame, of honor, and distinction among men are to be gained, or a name transmitted to posterity as an ornament or benefactor of the race, or the ends of lofty ambition to be answered, the profession is already overcrowded. Few men in the profession carve their names high on the roll of fame, and in the scramble for distinction thousands are trampled down to rise no more. The names of a few like Hippocrates, Galen, Celsus, Cullen, have come down to us from the long ages of the past, while the mass have passed away unheralded and unknown. "The dead forgotten lie." Few in our day will survive their own demise. The roll of fame is quickly read. Here and there one succeeds in compelling the admiration and applause of the public, but the toilsome, laborious, tangled way through which he travels to accomplish his purpose, is too tedious and rugged for the mass. The smoother path is more frequently traveled, and most are content, when the first fresh, warm outburst of ambition is met with the cold, chilling blast of neglect, to give up the chase and plod along the more beaten track.

Viewed, yet again, as a science, not yet fully developed, the border lines only of which have been reached, and in which vast progress is yet to be made, we have not too many doctors. The field is broad and expansive. As new avenues are entered, new light will dawn. As new discoveries are made, broader fields, yet unexplored, will present themselves to view; and without jostling aside their neighbor to open a pathway for themselves, each may find enough in anatomy, in physiology, in therapeutics, in pathology, in all the relations of these to each other, to health and to disease, to life and to death, to employ their utmost exertions, and to reward their utmost labors. Were doctors as the sands of the sea-shore for number, medicine as a science would task and

compensate all their toil, and the more rapid and certain the progress they made, in investigation and in results, the more assuredly would humanity rise up and call them blessed, the more certainly would the profession be a blessing to him that gives and to him that receives.

The question then returns to us, Have we too many doctors? We answer, NO! With men of thorough preliminary study in all the branches of education, of high intellectual attainments; with men thoroughly educated, by a long and systematic process of training, in all the branches of medical science; with men fully qualified to develop the results of their education in practical life; with men of moral worth as well as intellectual attainments, the medical profession is not overstocked. There is ample room for many more than have hitherto sought its honors. In this view we may answer our question emphatically in the negative.

Still the inquiry returns, Have we too many doctors? We answer, Yes! Far too many. Too many whose professional attainments will never reach the heights of mediocrity; too many whose brawl and swagger and gross immorality disgrace the noble profession; too many who differ from the most arrant quacks only in having permission to write "M.D." at the end of their name. The rejection of two-thirds of all the candidates who present themselves for examination before the examining boards of all our colleges would be a sanitary measure of decided and permanent benefit, not only to the profession at large, but to the interests of the whole people, and secure a succession of thoroughly educated physicians.

COMMENCEMENT OF JEFFERSON MEDICAL COLLEGE.

The annual commencement of this institution took place on Saturday last, at the Musical Fund Hall. The Hall was filled to its utmost capacity, a large proportion of the audience being ladies. Precisely at twelve o'clock the Faculty, headed by the President of the College, Hon. Edward King, LL.D., and Prof. Robley Dunglison, M.D., entered the Hall, and, together with invited guests, took seats upon the platform. The graduates followed, each designated by a white rosette, and took their appointed seats. Prayer was offered by Rev. John Chambers.

The degree of Doctor of Medicine was then conferred upon the following gentlemen by the

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President of the College, they severally advancing to the platform as their names were announced by Prof. Dunglison, viz.:-

Andrews, J. Charles, Pa.; Angie, John S., Pa.; Applegate, Jos. S., Ind.; Baldwin, Louis K., Del.; Barnes, Ira Norton, N. H.; Barton, J. Hervey, Pa.; Bates, J. Wm. P., Md.; Beane, Wm. H., Pa.; Berg, J. Fred., Jr., Pa.; Blaydes, James E., Tenn.; Bower, Henry J., Pa.; Brooks, Edward, N. Y.; Burg, S. Wesley, Pa.; Burnett, Joshua U., N. B.; Cantrell, Wm. A., Pa.; Carroll, Thomas, Pa.; Conklin, Gustavus, Pa.; Cook, Wm. Harvey, Pa.; Duffell, Charles L., N. J.; Edward, James L., Ill.; Fitch, Pelatiah, N. J.; Gast, John Reynolds, Pa.; Girvin, Robert M., Pa.; Graham, Samuel, Pa.; Grant, John, N. S.; Hayes, Joseph H., Pa.; Healy, James, Ky.; Hidden, Wm. Buffet, N. H.; Hoffman, Chris. N., Pa.; Keen, Wm. W., Jr., Pa.; King, Cyrus H., Pa.; Knipe, Jacob O., Pa.; Lane, Edward G., D. C.; Lewis, Edw. C., Ohio; Litz, Jefferson, Pa.; Marchand, Jas. I., Pa.; Marchand, Wm. K., Pa.; Martin, Jos. R., Pa.; Maury, Frank F., Ky.; McClung, Leigh, Ohio; McCormick, S. C., Pa.; McGuigan, Jas. A., Pa.; McHenry, Thos., Pa.; Miller, Jacob M., Pa.; Mitchell, H. H., Mass.; Montmollin, Jas. M., Ky.; Mosser, M. Brem., Pa.; Myers, Isaac N., Ind.; Neblett, Hy. M., Va.; Norris, John Clem., Md.; Okie, Wm. T., Pa.; Owens, John E., Md.; Patterson, Jas. R., Ill.; Perry, M. S., Mass.; Porter, George L., Pa.; Purcell, Wallace M., Ind.; Raker, Henry M., Pa.; Reed, J. Farley, Pa.; Reeves, W. H., M.D., Ohio; Reinholdt, John B., Pa.; Robins, Lorenzo D., Pa.; Rogers, Ebenezer, Pa.; Rumbold, F. Frazier, Wis.; Scip, George W., Pa.; Shearer, James, Pa.; Smurr, Thomas A., Ohio; Snyder, Peter C., Pa.; Steckel, Edmund F., Pa.; Sternberg, A. J. N. Y.; Stewart, Jeremiah S., Pa.; Strawn, B. F., Mo.; Stode, John T., Ky.; Stubbs, Joseph H., Pa.; Taylor, Brent W., Ky.; Thompson, E., N. F.; Thompson, Michael, Pa.; Treadwell, P., N. H.

Of the above, there are from—Pennsylvania, 42; Kentucky, 5; Ohio, 4; Indiana, 3; New Hampshire, 3; Maryland, 3; Massachusetts, 2; New York, 2; New Jersey, 2; Illinois, 2; Tennessee, 1; Missouri, 1; Delaware, 1; Virginia, 1; Wisconsin, 1; District of Columbia, 1; New Brunswick, 1; Nova Scotia, 1; Newfoundland, 1. Total, 77.

This ceremony being concluded, Prof. Dunglison congratulated the graduates on the distinction they had attained, and wished each of them a long career of happiness and prosperity; and then proceeded to distribute to the favored ones the large number of mementoes of affectionate regard from the fair sex, in the shape of choice bouquets, which covered a good-sized table upon the platform.

Prof. Samuel H. Dickson then delivered the valedictory address, in which he congratulated the graduates on being inducted into full fraternity with the members of the profession everywhere; and on having conferred on them the rights and privileges of the physician. A necessity arising out of the original frailty of nature itself, had from time immemorial set apart a body of men, to whom are committed the sacred trust of the physical health of their fellow-beings. Into that body they had been admitted by the deliberate act of the proper authorities constituted by law; and in their special sphere would be endowed with a more despotic power than any other known among men.

The duties and obligations incurred by the physician are those which are binding upon him individually; those which he owes to his patients; those which connect him with his fellows and

associates, and those which spring from his relations to the community in general. While upon this subject, he said :

" If there are any of you whom circumstances have situated unfavorably for your future struggles with the world, I would press it upon you as one of your most immediate personal duties to enter on such a plan of study as shall place you in an easier and more becoming position, and remove a difficulty which will always weigh heavily in your competition with professional rivals better prepared. As members of one of the learned professions—so called—thus much will always be expected of you. Your associates will, of course, be men of letters and scholars; to maintain among whom a fair and eligible standing, you must needs become familiar with the current literature of the day. The taste for general reading thus aroused will grow upon you; and the better order of reviews will direct you in the selection of proper books, and enable you to employ such time as you are able to devote in this way, most usefully and effectually.

* * * * *

" Beyond the indispensable technical attainments in anatomy, physiology, and pathology, the physician will feel himself greatly at a loss, if unprovided with a wide extent of collateral scientific acquirements. He must prepare himself to meet the sudden and appalling exigencies of poisoning by design and accident; and qualify himself for those inquisitions which illustrate and adorn the jurisprudence of the present time, making human life so much more secure than formerly by the detection of the most hidden secrets of the murderer, thus rendering impossible all escape from justice; as well as by the prompt and exact suggestion of the proper antidotes to deleterious agents. For his uses, too, herbs, roots, and flowers must be made to yield up their most recondite principle, their most delicate aroma; airs, earths, and waters must be analyzed, the pure set apart from the impure, and the most dangerous impregnations sometimes converted into available medicaments. From the depths of the dark mine, from the unvisited recesses of old ocean itself, he calls up the metal and the weed, the living secretion and the dissolved salt to add to his resources.

* * * * *

" Keep yourselves informed of the progress going on around you, by the regular perusal of some of the numerous journals. Support by subscription one or more of those most convenient to you, and contribute for publication whatever may occur to you of special interest. Select and receive from abroad or from a distance some one which shall afford you a wider scope of information from a different point of view. With a large mass of trivial and useless matter, these gazettes contain a great deal that it is important to you to know. The former portion soon dies and is forgotten; what is worth preserving will remain.

" Exercise all the influence which you may acquire, in behalf of the universal education of

the people; foster all institutions of learning, from the primary school to the university; aid in the collection of libraries and museums in every town and village. You are enlisted as the sworn enemies of imposture and delusion; these have no ally but ignorance, they decay and die wherever true knowledge is diffused."

During the address, the speaker alluded to certain improprieties and inconsistencies in the habits and mode of living of our countrymen. Our chivalrous devotion to women, our tender care of their comfort and well-being were characterized as noble traits in the American character; but to carry out this proud homage, the professor remarked,

" We must not give them just cause of offense by any indifference to the requirements of personal neatness. We must not intrude into their gentle presence reeking with the fumes of tobacco, or redolent with the products of the still; especially should the physician abstain from thus annoying them when prostrated by languor and morbidly susceptible. We must not, in their visits to our halls and theaters, subject them to soil and pollution of the flowing dress, and even render insecure the slippery footstep by a repulsive self-indulgence, exclusive and characteristic in its often-denounced prevalence among us. Be it our pride and distinction to set an example worthy of universal imitation, and sedulously to abstain from every violation of decorum or neglect of considerate regard for those about us, whether at home or in the sick chamber, in public conveyances, or places of amusement and resort. Everywhere let our dress and address, conversation and conduct, be such as would not be looked on as derogatory or unbecoming in the gentleman of the most refined and polished nationality."

The charge was concluded as follows:—

" At this moment of parting, let me once more remind you of the weighty interests entrusted to your keeping. You are charged not only with your own future destinies, but, in a certain sense, with the honor of our profession, which must not be tarnished in your hands; and with the reputation of your Alma Mater, which, we trust, you will always cherish with zealous devotion. To you she looks for common glory and renown; upon you she leans for future support and aggrandizement. Your successes will be trophies to her praise; your advancement will constitute her triumph. Her earnest eye will be fixed ever on your course; her maternal heart will throb with anxiety in all your trials; and her prayers ever ascend for your unceasing progress in knowledge and in virtue."

The address was delivered in an eloquent manner, and was well received.

The whole number on the sick list of the army of the Potomac is about 1500.

EDITORIAL NOTES AND COMMENTS.

Kensington Water Works.—The bad quality of the water furnished to the people of the northeastern wards of the city is officially recognized by the chief engineer of the Water Department, and the remedy proposed is to discharge the water from the Delaware reservoirs, and supply that portion of the city at once with water from the Schuylkill. This is the proper course, and should be adopted without delay; and when this is once done, the entire Delaware works should be abolished as an intolerable nuisance. Their location is bad, just at a point in the river where, by the formation of eddies, the filth swept into it from the city drainage must necessarily accumulate, because there is no current to carry it away; and it is drawn up, foul from scum and sediment and putrefying matter, through the leaky plank raceways to the reservoirs, to be distributed to the people. No wonder an epidemic is the result. Greater is the marvel that so few have perished from its use.

The Death of Governor Pennington.—A correspondent informs us that the quantity of morphia taken by Governor Pennington was *two* grains, and not *eight*, as stated in our issue of March 1st, and that the drug was given in two portions of one grain each, at an interval of an hour. His death took place about seventeen hours after the first dose, whether from the morphia or disease is not certain, as a mortal issue was anticipated by both physicians before the drug was taken.

We make the correction with pleasure.

New York University, Medical Department.—The annual commencement in this college occurred last week at the Chapel building. Chancellor Isaac Ferris delivered the opening prayer, and conferred degrees upon the following gentlemen, sixty-five in number:—

Rollin T. Baker, New York; Edward Bennett, New York; Frederick Benoit, Canada East; John L. Brainer, New Jersey; Henry M. Brush, New York; Richard C. Carlisle, South Carolina; Dwight S. Chamberlin, New York; Wm. H. Chamberlin, New York; Wm. C. Clark, West Indies; Mahlon J. Davis, Pennsylvania; Edmund Do Witt, New Jersey; James W. Dickie, Canada West; Hugh Doherty, New York; George W. Edwards, New York; Wm. H. Ensign, Connecticut; John T. Farrell, Canada West; John N. Freeman, Illinois; Albert H. Gallatin, New York; W. J. Gilbert, North Carolina; George William Hatch, Maine; Samuel E. Holtzman, Indiana; Abel Huntington, New York; A. G. Kimberly, New York; John C. Lamont, New York; Alfred S. Laubach, Pennsylvania; John V. Lauderdale, New York; Samuel Lewen, New Brunswick; Mathias L. Lord, New York; John N. Lowe, New Jersey; Samuel Lynch, New Hampshire; Beverly N. McCleery, New Brunswick; George E. McDonald, New York; W. H. Mather, Connecticut; Aaron J. Miller, Peng-

sylvania; James H. Mills, New York; George B. Munger, New York; Aiden E. Nelson, Vermont; Thomas C. O'Callaghan, Massachusetts; Eugene S. Olcott, New York; George H. Owen, New York; Solomon H. Peck, New York; Thomas C. Pollock, Pennsylvania; John L. Pertwood, Virginia; Harris Pushor, Maine; Wm. S. Robertson, New Brunswick; Marvin C. Rowland, New York; C. Allen Sears, Connecticut; Tr. C. Selberling, Pennsylvania; John G. Sinclair, Canada West; George C. Smith, Massachusetts; James W. Southworth, Jr., Missouri; Pierre S. Starr, Connecticut; David T. Stowell, New Hampshire; Sylvester E. Strong, New York; A. E. Summer, Connecticut; Wm. Taylor, Jr., New York; J. Mott Throop, New York; John T. Tracy, Pennsylvania; G. Kempton Turner, Virginia; Fort Van Keuren, New York; Wm. K. Van Reyen, New Jersey; Thomas C. Walton, Canada West; Daniel F. Wells, New York; Edward J. Whitney, New York; Thomas S. Yard, New York.

The annual prizes were awarded as follows:—Dr. Mott's silver medal, to W. H. Bates, New York; Dr. Mott's bronze medal, to W. H. Mather, Connecticut; Dr. Van Buren's first prize, to Eugene S. Alcott, New York; Dr. Van Buren's second prize, to W. H. Bates, New York; Dr. Metcalfe's first prize, to J. H. Mills, New York; Dr. Metcalfe's second prize, to A. S. Laubach, Pennsylvania.

The valedictory address was delivered by Prof. Van Buren.

University of Buffalo, Medical Department.—The annual commencement of this institution occurred on the 25th ultimo. The exercises were held in the American Hall in the presence of a large and highly respectable audience. The degree of Doctor in Medicine was conferred on the following gentlemen, by Hon. Millard Fillmore, Chancellor of the University, who accompanied the ceremony by a brief and appropriate address:—

John W. Stille, Otsego, Otsego Co., N. Y.; Thomas B. Minchen, Adrian, Lenawee Co., Mich.; William Robinson, Buffalo, N. Y.; Samuel W. Wetmore, Kingaville, Ashtabula Co., O.; Deles W. Harrington, Akron, Erie Co., N. Y.; John R. Stewart, North Cohocton, Steuben Co., N. Y.; P. Henry Clark, Ashland, Ashland Co., O.; Charles G. Robertson, Waterford, Oakland Co., Mich.; Elias S. Chapel, New Lyme, Ashtabula Co., O.; Abel G. Rathbone, New Lyme, Ashtabula Co., O.; Horace B. Northrop, Arcade, Wyoming Co., N. Y.; Solomon V. Frame, 2d, Depauville, Jefferson Co., N. Y.; John P. Blawie, Fort Miller, Washington Co., N. Y.; Eugene A. Chapman, Henderson, Jefferson Co., N. Y.; John W. Goodson, Bellevue, Huron Co., O.; Theodore W. Burton, Waterford, Erie Co., Pa.; Oscar E. Wainwright, Akron, Erie Co., N. Y.; John Cole, Lancaster, Erie Co., N. Y.; James S. Smith, Burford, Brant Co., C. W.; Edward Little, Newberry, Middlesex Co., C. W.; James W. Case, Rochester, N. Y.; Horace Tupper, Buffalo, N. Y.; John Jenkins, Shelby, Orleans Co., N. Y.; John C. Wall, Oshawa, Ontario Co., C. W.; Andrew J. Haughton, Cambria, Niagara Co., N. Y.; James S. Wilkin, Shawnee, Niagara Co., N. Y.; Charles W. Carrier, Newfield, Thompsons Co., N. Y.; Charles W. Colyer, Buffalo, N. Y.

From the *Buffalo Med. and Surg. Journal* we learn that the charge to the graduates was given by Prof. James P. White, and that it was a very able, appropriate, and practical address. He urged the graduates to remember that success in life mainly depended upon themselves; to trust nothing to fortune or fancied position; to rely chiefly upon their own unaided efforts with inflexible purpose; to be always painfully alive to

the safety and welfare of their patients; to be close students and careful observers; to explore with enthusiasm the broad field of medical science; to avoid quackery themselves, and to remember that public confidence in scientific acquirement is steadily onward, and will progress in exact proportion with the enlightenment of the community. The only exception to this rule was the clergy, who have done more harm than any other class by giving certificates of cures by quack remedies.

After the commencement exercises a sumptuous supper was provided for the graduates, curators, faculty, and invited guests, by Prof. T. F. Rochester, which passed off very happily.

Vermont Medical College.—Upwards of sixty students are already in attendance upon the spring session of this College, the only one in the State which continues its sessions during the present crisis in our national affairs.

Dr. C. L. Allen, late of the Castleton Medical College, has accepted the Chair of Theory and Practice of Medicine, recently tendered him by the Faculty, and enters upon his duties at the middle of the term. Dr. Allen is an excellent physician, and has been for several years past a successful practitioner in Middlebury. He is a member of the State Medical Board, and, since the inception of the measure, has had the exclusive charge of making up the State registration reports of marriages, births, and deaths. (Will the doctor furnish us a copy of them?)

Professor Carpenter, who has so ably filled the same chair for several years past, still retains that of *Materia Medica*, so that the College has now a complete and an excellent board of teachers in all the departments, and affords as good facilities for instruction and progress in the healing art as can be found outside of the great centers of medical instruction—the cities.

Hospital arrangements of the 5th Vermont Regiment.—The surgeon of this regiment, Dr. W. P. Russell, of Middlebury, seems to be making "innovations" upon the regular system of hospital practice, and prescribing for his patients remedies not mentioned at all in the "regulations." The only thing, it strikes us, which can save him from a vote of praise or censure for his temerity, is the entire success of the treatment. Just read the prescription and its wonderful effects. And we presume not a "wry face" was made at it by one of the patients.

"The hospital of the 5th, which had been located some two miles from camp, and consisting of a house and barn, (the house for the sick and the barn for the convalescent,) is about to be removed to the camp, and for the past week the proper authorities have selected those who may safely occupy their quarters in camp, and sending them in; at the same time those unable to withstand camp life for the present are to be sent to the General Hospital. I leave the reader to predict the object of this movement. I will tell you the means resorted to by our quaint Dr. Russell for successfully selecting those who were well enough to go to their quarters. During the past week they held two grand 'levees' at the hospital. The music for the last was furnished by two first-class violinists, selected from the Vermont Brigade, and engaged for this particular occasion. There was one thing only that marred the festivities, and that was the very limited number of the 'better' partners 'for the next set.' Not one to be seen. To meet this deficiency Dr. Russell was ready, and found efficient for the emergency. He selected a certain number of the most feminine-looking, most beardless, and had them attired in white and figured morning and sick gowns, and, although they presented for the most part a rather ghostly appearance, it was found the substitute answered very good purpose. Well, Dr. Russell proclaimed to the multitude that those who did not choose to 'trip the light fantastic toe,' must be prepared to meet the alternative of going to the General Hospital. The measure was effectual. Out of some thirty invalids not more than one-third are checked for the General Hospital. Owing to the 'Army Regulations' not allowing an officer or soldier to speak in terms either of praise or censure, I will only say that Dr. Russell is considered a 'perfect brick' by those who have been under his charge. The sanitary condition of the whole Vermont Brigade has much improved of late, and I hope we shall be 'O. K.' before long."

Correspondence.

NEW YORK CORRESPONDENCE.

At the last meeting of the Surgical Section of the New York Academy of Medicine, presided over by the amanuensis Dr. James R. Wood, Dr. Arnold, of Yonkers, read an able paper on railroad necessities, accidents, and all the various misfortunes incident to explosions, collisions, etc. etc. Dr. Arnold maintained, with emphatic zeal and becoming truth, that a company, fund, or something of the kind, should be formed, with a view to ameliorate the condition of passengers; the best method for securing a satisfactory result would be the paying a regular salary to compe-

tent surgeons at certain convenient distances from wayside mishaps. Villages are intersected by railroads, and, if men of prompt energy, coolness, and special emergency qualifications were appointed, their incomes would prove most gratifying if connected with certain railroad companies, who aid in no small degree in causing insurance firms to liquidate and make good what they have destroyed.

The paper was received in a favorable manner, and it is hoped that something definite will proceed out of this suggestive germ of philanthropic meditation.

Dr. Wood next rose and said that Dr. George K. Smith's "paper" was again before the Academy for discussion. Dr. Alfred C. Post made a few remarks to the effect that Dr. Smith had not exactly comprehended the intention or purport of his previous suggestions. There being no further pros and cons with regard to this learned paper on "Intra-capsular Fracture and its Relations," which has already occupied the attention of the Surgical Section during the entire winter, and from its first meeting, the next subject in order was that of "Tracheotomy." Dr. Raphael, of the New York Medical College, then rose and recommended the postponement of the subject till the next meeting. The doctor remarked that the operation was one of lasting importance, requiring vast knowledge, and no little experience. Moreover, as Dr. Voss had devoted so much time to the particular branch of diseases requiring this treatment, and performed the operation as frequently as, if not oftener than, any other surgeon in the city, he proposed that Dr. Voss open the discussion on the following occasion. Here the Society adjourned.

There has been more rheumatism in the city this year than is generally expected, even during an open winter. Diphtheria has prevailed with apparent luxurious impunity, returning, in some instances, to the same victim in less than two months. "Pars magna fui!"

I recently read in one of our journals that the tongue had been entirely and successfully removed from a patient, in England, for cancer. He recovered; eats and converses intelligently, finding it more difficult to pronounce K than any other letter. I find it difficult to pronounce this O—K!

GOURMET.

Filthy Streets.—Unless speedily cleansed, the most disastrous consequences to the health of the people must result from the filthy streets of the city.

ARMY CORRESPONDENCE.

HEADQUARTERS, 5TH REGT., EXCELSIOR BRIGADE, U. S. V. }
CAMP MAGAW, LIVERPOOL POINT, MD., MARCH 5, 1862. }

A Case of Alleged Contusion from the Wind of a Cannon-Ball.

MESSRS. EDITORS:—Military surgeons, I believe, without exception, unite in affirming that injuries cannot be inflicted by the wind of a passing ball, but popular belief tends to the contrary opinion, and there are also some in the profession who still adhere to the latter opinion. The experience of all the great military surgeons is, that cannon-balls may pass in the closest proximity to the body without inflicting the slightest injury; but popular opinion clings with its usual pertinacity to the opposite idea, and every old man-of-wars-man or old soldier fondly relates some case of which he declares he was an eye-witness, which proves, as he believes, the popular hypothesis. The case which I propose to describe will probably be heralded far and wide through the newspaper press as indubitable proof of the correctness of the popular belief, and, therefore, I propose to detail the facts of the case.

On the 28th of February last General Sickles was reviewing the 5th Regiment of his brigade upon a level piece of ground on the bluff at Liverpool Point, Maryland. While thus engaged, the enemy opened fire upon the regiment from a thirty-pound rifled Parrot gun placed upon a hill on the opposite bank of the Potomac, which is at this point nearly three miles wide. Captain R., one of the brigade staff, was walking near the edge of the bluff, when a shell from the enemy's gun passed within (as near as can be estimated) about from six to eighteen inches of his body, at about the height of the knee, and buried itself in the ground at a point a few feet distant, where it exploded, throwing the earth in every direction.

The shell was (judging from other shells which were fired from the same gun and failed to explode) a conical percussion shell, some twelve inches in length and four inches in diameter, and weighing thirty pounds.

As the shell whizzed past him, the captain involuntarily wheeled around, turning upon his left foot and swinging around his right, (the one toward the enemy.) He felt, as he swung around, a pain in his knee, and exclaimed, "I've jumped around so quick, I've hurt my knee!" In conversing about it afterward, he mentioned that, as the shell whistled by him, he "felt a sudden pressure" upon the side from which the shot came,

and it was a question with him whether he did not receive the injury from that pressure.

Upon examination, the skin upon the outer side of the knee was found ecchymosed. He applied to it a stimulating liniment, and in a few days it was well again.

This case is cited throughout the division as a positive case of injury from the wind of the ball. To my own mind it appears clear that the injury or ecchymosis was either produced by the sudden jump, as was his first impression, or it may have been done by a clod of earth thrown by the explosion of the shell, (he says it was thrown around and over him.) Several persons were standing within a few feet of the captain, and declare they felt the pressure described by him, to a greater or less extent. I have, however, given the facts, and the reader can draw his own deductions.

J. T. CALHOUN.

NEWS AND MISCELLANY.

Salting the Streets.—As a finale to the discussion which has agitated the city and the Councils during the few weeks past, we give the following report from Prof. Rogers of the University, to the Committee of Councils, and only add that the Committee made *their* report in accordance with the views herein expressed:—

“On the 5th ult., at noon, with the thermometer at 33 degrees in the shade, Prof. Rogers made two series of observations, one upon the materials trodden upon by persons in walking, and the other upon the atmosphere. He found the temperature of melted snow and salt upon the crossings in Eighth, Ninth, Tenth, Eleventh, Twelfth, and Thirteenth Streets to range from 27 $\frac{1}{2}$ to 28 degrees, giving an average of 27.83. The temperature of an unmelted mixture of snow and salt, on various points in the same streets, ranged from 26 $\frac{1}{2}$ to 27 degrees, giving an average of 26.78.

“During that afternoon and until nine p.m., he discovered that at an elevation of three feet above the ground, no essential difference existed between the atmosphere of the salted streets and that of those where no salt had been thrown; since, had such a difference existed, the thermometer should have fallen more rapidly and to a greater extent so soon as it was taken from an unsalted to a salted street, and then should have risen again, or shown a more tardy rate of fall, upon being removed from a salted to an unsalted avenue.

“He moreover asserted that salt, as used in the quantity employed by the city railroad companies for hastening the removal of snow from

their tracks, produces a mixture intensely cold to the feet is *erroneous*, since the average reduction of temperature in the liquid mixture of snow and salt was, at the places of experiment, only 4.17 degrees below that of snow water, and the average reduction in the unmixed mixture was but 5.22 degrees below that of snow itself.

“In the second place, he demonstrated that a like error has prevailed in supposing that the atmosphere breathed by men and horses over the *salted* streets is *greatly colder* than that which they inhale on the unsalted thoroughfares, the table showing that at an elevation of three feet above the ground there is no appreciable difference between the temperature of the air resting over the salted ground and that of the snow alone. That the air immediately in contact with the salt and snow mixture is a little colder than that resting upon the snow itself, no one will doubt; but so little is the air a conductor of heat, that this small difference of temperature does not, as proved by experiment, extend to any considerable distance into the upper strata.

“In conclusion, he observes that salt does not itself volatilize or evolve either of its constituents, and being an antiseptic or corrective of putrefaction, tends, so far as it exerts any influence, to preserve the atmosphere, over the salted thoroughfares, *pure* and *salubrious*.

“That the practice of salting the railroad tracks is attended by the production in the liquid and semi-liquid measure of a temperature not more than a few degrees colder than that of melting snow.

“That the use of salt, while it accelerates the thawing of snow, likewise, by forming a solution less readily frozen at night or in cold weather than simple snow water, promotes and greatly hastens the drainage of the city, and thereby in proportion curtails the period to which the feet of persons and horses are subjected to the cold.

“That this depression of temperature is only temporary, and continues just so long as the snow is melting. The solution, when once formed, obeys the law of all other liquids, and may be warmed by the sun or other influences.

“That the atmosphere at the elevation above the surface at which men and animals on the street breathe it, is not perceptibly colder by the use of salt.

“That, so far as there is any hygrometric change produced in the air, the effect of salt is to render it more free from moisture, and practically drier. This effect is at most but small, and only occurs near the surface of the cold mixture.

“That leather is penetrated by salt and water less readily than by pure snow water, and, in consequence of there being a small percentage of salt present, it is not, when wet with it, sensibly more difficult to dry than when wet with water alone.

“That there is nothing corrosive in the solution of salt and water, nor any specific power to rot or disintegrate leather or fade colors.”

The New Episcopal Hospital.—The Managers of the Episcopal Hospital have issued their yearly report, embodying some philanthropic statistics, with an account of the new hospital building:

The current expenses of the hospital for the year, exclusive of building operations, have amounted to . . .	\$5753 97
Less advertising and printing	\$53 79
Less improvements and repairs	320 46
	374 25
	\$5379 72
Less cost of medicines for 5237 dispensary patients, at 12 cents each,	628 44

Net cost of maintaining the hospital, \$4751 28

Of this sum, the amount received from the collections in the churches on Thanksgiving Day was \$2704 31.

The whole number of patients treated in the Hospital during the year past is 360. The largest number of patients at any one time was 35. The daily average number was 28. The average time of residence of each patient was 26 days.

The number of patients who have received the benefits of the dispensary practice is 5237, making an average of more than fourteen per day throughout the entire year. The whole number of patients prescribed for since the opening of the Hospital is twenty-four thousand four hundred and fifty-one.

The increase in the facilities of the institution will have the effect of adding largely to the drain on the treasury. It is thought that not less than \$21,000 a year will be required to support the one hundred and forty beds which the new wing will accommodate.

The chapel, so far as the exterior is concerned, is entirely finished. And, in reference to the interior, the work is so far advanced that it may readily be completed by an early period in the spring.

The west wing is all under roof, and the windows are all glazed. The wards of the wing are in such a state of forwardness that they will probably be ready for the reception of tenants by the first of July. The main, or central building, has all the walls completed, except a portion of the front and one of the gables. The roof is closed in, and the unfinished portion is well protected for the winter. The amount already subscribed toward the erection of the building has reached the sum of \$120,000. Not less than \$80,000 more will be required for the erection of the eastern wing, and for carrying forward the whole structure, with its adjacent grounds, to a state of entire completion. The amount of money expended in the erection of the building during the year is \$46,453.

Summit House Hospital.—This is a new hospital lately fitted up for the reception of sick and wounded soldiers by the government. It is

located on the Darby Road, a short distance this side of the Blue Bell. It is under the charge of Dr. Winthrop Sargent as surgeon-in-chief, together with Dr. John M. Fox, of this city, as assistant surgeon. The hospital was opened on Friday last, March 7th.

University of Pennsylvania.—The number of students attending the Medical Department of this institution during the session just closed was 309, of which 218 were from Pennsylvania. The annual commencement occurred on Thursday last, when the valedictory address was delivered by Professor Leidy.

Both the medical colleges have fallen off largely in point of numbers on account of the crisis in our national affairs.

Long Island College Hospital, (N.Y.)—Four hundred and nineteen patients were treated in the Long Island College Hospital during the month of February: 230 were medical cases, 41 diseases of women, and 148 surgical cases. The diseases are classified as follows: Of the nervous system, 15; general system, 11; digestive organs, 60; genito-urinal organs, 59; lungs, 48; heart, 1; throat, 6; skin, 34; bones and joints, 14; eye, 8; ear, 1; fevers, 17; rheumatism, 8; fractures, 6; dislocations, 1; abscesses and felonies, 20; ulcers, 9; contusions, 10; wounds, 11; burns, 3; hernia, 2; goitre, 1; tumors, 1; enlarged glands, 5; foreign bodies removed, 1; tongue-tie, 2; club-foot, 1; vaccinations, 14; unclassified and minor cases, 50; 700 prescriptions were dispensed.

Albany, N.Y., Medical College.—The number of students in attendance during the session of 1861 was 68. The number of graduates, 21.

Hospitals in Great Britain.—There are 167 hospitals in Great Britain, as follows: England, 76; Scotland, 15; Ireland, 76.

Productiveness of Animalcules.—Pritchard tells us Ehrenburg found that a single animalcule lived nine days; during the first twenty-four hours it was developed by transverse self-division, into three animals; these in twenty-four hours formed two each in the same manner; so that by self-division (without ova) these animalcules increase three or four fold in twenty-four hours, and may thus produce a million from a single animalcule in ten days. Such are the amazing powers of reproduction conferred upon these humble creatures, powers which are fully employed when the surrounding circumstances are favorable, and which, in the aggregate, change the condition of large masses of matter, and bring within the circle of life millions and millions of particles every minute of the day.—*Slack's Marvels of Pond Life.*

Physiological Effects of the Electric Telegraph.—It appears that constant watching of the needles of electric dial-plates begins at length to produce an unpleasant effect upon the eyes of some of the operators. After laborious service, and

especially after service at night, the retina is frequently so affected that for a considerable time all objects appear double, and shrouded in a haze. This affection is developed only at those stations where the needle telegraph is employed. This telegraph is no longer used in France; it is but little used in England, except the needle telegraph of Wheatstone. In France the printing telegraph is preferred. Two new systems are about to be adopted; the first that of Hughes, an American, the other that of Caselli, of Florence. The first prints the Roman letters with velocity which permits the transmission of twenty or thirty words per minute; the second, called the *pantelograph*, reproduces everything autographically, writing, linear drawings, portraits, landscapes, etc. etc., with a velocity of eight to ten words of ordinary writing, or sixty words written with the characters of Morse.

Dr. Bedford's work on Diseases of Women and Children has been translated into French and German, a circumstance which is worthy of note, as a compliment not often paid to an American author on medical subjects.

Instantaneous Black Hair-Dye.—Those who have occasion to use a hair-dye to improve their external appearance, or to conceal from their friends the approach of age and venerable gray hairs, will find in the following recipe the ingredients of the hair-dyes generally in use, and will be able to save some expense by procuring it for themselves. Any druggist will put it up for a trifle. We find it in the *Druggists' Circular*:

"Dissolve 30 grains of nitrate of silver in 3 drachms of distilled water; then add liquor ammonia q. s. to redissolve the precipitate which forms at first, and make the whole measure 6 fluid drachms. Preserve it in a glass-stoppered bottle. In another bottle dissolve 10 grains of gallic acid in 2 drachms of alcohol or cologne and 6 drachms of water. The latter liquid is first applied to the hair, and, when dry, the solution of silver over it. The directions are the same that will be found on any hair-dye preparation sold by perfumers."

Suicide in France.—Three thousand eight hundred and ninety-nine is the exact figure, which represents a daily average of more than ten. It would seem that the large majority of suicides are of males. Not more than 842 of the total number of self-murders were committed by women, 16 by children, and 3057 by men. Disappointed passion contributes less than we should expect from French society, and mainly to the male account. Thirty-eight men and 11 women, being all of ninety years and upward, may be set down as self-destroyers who sought nothing but to escape the tedium and painful decays of age. The majority of cases were with persons under sixty years old and over forty, and they occurred with greatest frequency in April, May, June, and July. In England, also, November has by no means the fatal pre-eminence ascribed to it in

popular belief; and the influence of weather is not in any way easily connected with these phenomena. The modes of suicide adopted were, by the statement we quote, very few and inelaborate. Hanging and drowning were resorted to in 2883 cases; suffocation with charcoal, in 271; shooting with gun or musket, in 206; with pistols, in 189. Death by sharp instruments was procured in 153 instances; by jumping from windows or high places, in 110; while the use of poisonous drugs contributed only 93 names to the ghastly list. These figures seem to us an illustration of the impulsive character of the crime. That poison should be so infrequently resorted to, is due, we think, to that cowardice which is the characteristic of suicides, and which prevents them from forcing their way to death by so painful a gate. The general ignorance of chemistry, and the restrictions imposed upon the sale of drugs in France, are additional reasons why toxical suicides occupy the lowest place in the list. By strangulation, drowning, and shooting, something like eight-ninths of these self-murders were effected.—*Dublin Med. Press.*

Sufferings of the Wounded at the Capture of Fort Donelson.—The physical suffering of all who were engaged in the attack on and capture of Fort Donelson probably exceeded that of any previous battle on this continent. The temperature was lower than on the occasion of the famous winter fight at Eylau, and the misery of the men, from wet and frozen clothing, and insufficient food, was perhaps as great. On Thursday, the first day of the fight, the temperature was but ten degrees Fahrenheit, and snow fell during the day and the succeeding night. Feet and hands were, in many instances, frozen. It is believed that many of the wounded died where they fell from freezing, as the armies were so near together that neither belligerent could venture out to relieve the wounded or remove the dead. It is said that some of the wounded laid in the field from Friday until late on Sunday, and, when rescued, were stiff with cold and covered with snow.

Books and Pamphlets Received.—Gross's Surgery, 2d edition, two volumes; from Blanchard & Lea, publishers. Gray's Anatomy, Descriptive and Surgical; from Blanchard & Lea, publishers, 2d edition. Diseases of Women and Children, by Gunning S. Bedford, M.D.; 7th edition; from the author. Wm. Wood, publisher, N. Y. Medical Society of New Jersey, Transactions, 1862. Medical Topography of Camden County, N. J., by O. H. Taylor, M.D.; from the author.

DIED.

LEIB.—On the 8th instant, in this city, Eliza, wife of the late Henry F. Leib, M.D., in the 49th year of her age.

MITCHELL.—On the 8th inst., B. Rush Mitchell, M.D., U. S. N. in the 41st year of his age.

THOMAS.—At Fortress Monroe, Va., January 18th, Charles K. Thomas, M.D., Assistant Surgeon 11th Pennsylvania Cavalry, in the 25th year of his age.